CLAIMS

1. A method for representing a motion for two blocks, comprising the steps of:

(A) exchanging a particular value of a plurality of values with a memory, each of said values defining which of said two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types; and

(B) representing said motion for said two blocks with a group comprising said particular value and up to all of said motion vectors.

2. The method according to claim 1, wherein said group comprises a plurality of bits that is less than a maximum number of bits capable of representing each unique possibility for said motion vectors.

3. The method according to claim 1, wherein a first plurality of said motion vectors for a first of said two blocks are equal to a second plurality of said motion vectors for a second of said two blocks.

4. The method according to claim 3, further comprising the step of:

excluding said second plurality of said second motion vectors from said group.

5. The method according to claim 1, wherein said group includes at most two of said motion vectors.

6. The method according to claim 5, wherein said particular value defines how many of said motion vectors are used by at least one of said two blocks.

7. The method according to claim 1, wherein one of said values defines using none of said motion vectors.

8. The method according to claim 1, further comprising the step of:

using a list 0 prediction of said prediction types for said motion vectors, wherein each of said motion vectors is used for one of said two blocks.

9. The method according to claim 1, further comprising the step of:

using a list 1 prediction of said prediction types for said motion vectors, wherein each of said motion vectors is used for one of said two blocks.

10. The method according to claim 1, further comprising the step of:

using a bidirectional prediction of said prediction types for said motion vectors, wherein each of said motion vectors is used for both of said two blocks.

11. The method according to claim 1, wherein step (B) comprises the sub-steps of:

generating said group with said particular value while above a predetermined standard level for a bitstream; and

generating said groups without said particular value while below said predetermined standard level for said bitstream.

12. The method according to claim 1, further comprising the steps of:

interpreting said motion vectors in said group based upon said particular value while above a predetermined standard level for a bitstream; and

using said motion vectors in said group independently of said particular value while below said predetermined standard level for said bitstream.

13. An apparatus comprising:

a memory; and

a circuit configured to (i) exchange a particular value of a plurality of values with said memory, each of said values defining which of said two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types and (ii) represent a motion for said two blocks with a group comprising said particular value and up to all of said motion vectors.

14. The apparatus according to claim 13, wherein said group comprises a plurality of bits that is less than a maximum number of bits representing every unique possibility for said motion vectors.

15. The apparatus according to claim 13, wherein said group includes at most two of said motion vectors.

16. The apparatus according to claim 15, wherein said particular value defines how many of said motion vectors are used by at least one of said two blocks.

17. The apparatus according to claim 13, further comprising:

a coding circuit configured to encode said particular value within a bitstream.

18. The apparatus according to claim 13, further comprising:

a decoder circuit configured to decode said particular value from a bitstream.

19. The apparatus according to claim 13, wherein:

a first of said values defines using none of said motion vectors;

a second of said values defines a first prediction of said prediction types;

a third of said values defines a second prediction of said prediction types; and

a fourth of said values defines a bidirectional prediction of said prediction types.

20. An apparatus comprising:

means for storing a group;

means for exchanging a particular value of a plurality of values with said means for storing, each of said values defining which of said two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types; and

means for representing said motion for said two blocks with a group comprising said particular value and up to all of said motion vectors.

21. A method for representing a motion for two blocks, comprising the steps of:

(A) generating a representation for said motion having less than a maximum number of bits capable of representing each

possible combination of four motion vectors for said two blocks; and

(B) exchanging said representation with a memory.

22. The method according to claim 21, wherein said representation comprises a binary representation.

23. The method according to claim 21, wherein said representation is configured to accommodate (i) a first number of possible vectors for a first of said motion vectors for a first block of said two blocks, (ii) a second number of possible vectors for a second of said motion vectors for said first block, (iii) a third number of possible vectors for a third of said motion vectors for a second block of said two blocks and (iv) a fourth number of possible vectors for a fourth of said motion vectors for said second block.

24. The method according to claim 23, wherein said presentation is less than a base 2 logarithm of a product of said first number, said second number, said third number and said fourth number rounded up to a nearest integer.

25. The method according to claim 21, wherein said representation is capable of representing up to two motion vectors for each of said two blocks, each of said two motion vectors for each of said two blocks can take on at least 67,108,864 unique values, and said representation uses fewer than 104 bits.